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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 21372-2024

Replacing GB/T 21372-2008

Portland cement clinker

硅酸盐水泥熟料

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Categories

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. This document replaces GB/T 21372-2008 "Portland cement clinker". Compared with GB/T 21372-2008, in addition to structural adjustments and In addition to editorial changes, the main technical changes are as follows:

- a) Added the category of "road cement clinker" (see Chapter 4);
- b) Added the requirement of "chloride ion (mass fraction)" (see 5.1.1);
- c) The "insoluble matter" indicator has been changed (see 5.1.1, 4.1 of the 2008 edition);
- d) The "loss on ignition" indicator has been changed (see 5.1.1, 4.1 of the 2008 edition);
- e) The strength grades of general-purpose cement clinker, low-alkali general-purpose cement clinker and road cement clinker have been added (see 5.2.1.3);
- f) The compressive strength index of various types of cement clinker has been changed (see 5.2.1.3, 4.2.3 of the 2008 edition);
- g) Added physical requirements for the properties of sulfate-resistant cement clinker, medium-heat cement clinker and low-heat cement clinker (see 5.2.2);
- h) Added the requirement of "radioactivity" (see 5.3);
- i) Added the optional indicators of "water-soluble chromium (VI), heavy metal content and leachable heavy metal content" (see

1 Scope

GB/T 21372-2024 is the Chinese product standard for Portland cement clinker. Clinker is the intermediate that carries almost all of the value and all of the carbon in cement, and it is traded in very large volumes between the plants that burn it and the grinding stations that turn it into cement, which is why it needs a specification of its own rather than being covered by the cement standard. The document sets the classification and grades, the requirements on the chemical composition including the lime saturation factor, the silica and alumina ratios, the magnesium oxide and the free calcium oxide, the requirements on the mineral composition, the physical requirements covering the compressive strength at three and twenty-eight days measured on a standard ground sample, the setting time and the soundness, the limits on chloride and alkali, the test methods, the inspection rules, and the marking, packaging, transport and storage. The 2024 edition replaces GB/T 21372-2008. For a cement plant selling clinker, a grinding station buying it or an importer, this is the acceptance text.

This document specifies the classification, technical requirements, test methods, acceptance rules, delivery and inspection of Portland cement clinker (referred to as cement clinker). Collection, transportation and storage. This document applies to the production, inspection, delivery and acceptance of Portland cement clinker for commercial use.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB 175 General purpose Portland cement

GB/T 176 Chemical analysis methods for cement

GB/T 749 Test method for resistance of cement to sulfate attack

GB/T 750 Test method for the stability of cement autoclave

GB/T 1345 Cement fineness test method - Sieve analysis method

GB/T 1346 Test methods for water consumption, setting time and stability of cement of standard consistency GB/T 5483 Natural gypsum

GB 6566 Limits of radionuclides in building materials

GB/T 8074 Determination of specific surface area of cement - Blaine method

GB/T 12959 Method for determination of heat of hydration of cement

GB/T 17671 Test method for strength of cement mortar (ISO method)

GB/T 30760 Technical specification for co-treatment of solid waste in cement kilns

GB/T 30810 Determination of leachable heavy metals in cement mortar

GB 31893 Limits and determination methods of water-soluble chromium (VI) in cement

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 The raw materials of appropriate composition are calcined until they are partially melted to obtain a product with calcium silicate as the main mineral component.

4 Categories

Cement clinker is divided into general-purpose cement clinker, low-alkali general-purpose cement clinker, medium-resistant sulfate-resistant cement clinker, high-resistant sulfate-resistant cement clinker according to its use and characteristics. Cement clinker, road cement clinker, medium heat cement clinker and low heat cement clinker etc.